

KAFB 03



DEPARTMENT OF THE AIR FORCE

377th Civil Engineer Division (AFMC)
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RETURN RECEIPT REQUESTED

08 Jun 05

MEMORANDUM FOR MR. WILLIAM C. OLSON CHIEF
GROUNDWATER QUALITY BUREAU
NEW MEXICO ENVIRONMENT DEPARTMENT
PO BOX 26110
SANTA FE NM 87502

FROM: 377 MSG/CEVR
2050 WYOMING BLVD SE, SUITE 118
KIRTLAND AFB NM 87117-5270



SUBJECT: Disposal of Groundwater Monitoring Plan Purge and Development Water

1. This letter confirms the conversations between Mr. Mark Holmes of my staff and Mr. George Schuman of your staff on 29 Dec 04, 21 Jan 05, and 11, 13 Apr 05. The conversations concerned the analytical results of groundwater samples collected during the Jan 05 Stage 1 Abatement Plan for Nitrate Contaminated Groundwater sampling event (ST-105 NO3), the Oct 04 Tijeras Arroyo Group (TAG) sampling event, and the Oct 04 and Jan 05 sampling event for the Stage 1 Abatement Plan for the Jet Fuel Release at the Bulk Fuels Facility (ST-106). Also discussed were the analytical results for the development water generated for the Dec 04 monitor well installation as part of the RCRA Facility Investigation of the Abandoned Sewage Lagoons (WP-26), and Monitor Well Installations at Landfill 1 (LF-01) and McCormick Ranch (OT-28) in Sep and Oct 04.

2. The procedure for approval for the discharge of the purge and development water generated during these events was discussed in accordance with Kirtland Air Force Base's (KAFB) exemption from discharge plan requirements. As discussed, the development water is considered as a one-time event that is not included in the requested annual discharge volume (KAFB, 5 Jan 05, most recent request for both a continued exemption from a discharge plan and an increase of the annual discharge volume).

3. Kirtland AFB is in receipt of the New Mexico Environment Department (NMED) Groundwater Quality Bureau (GWQB) letter dated 12 August 1996 approving the discharge of sample purge water below New Mexico Water Quality Control Commission Regulation (WQCC) Subpart III, 3103, A, B, and C groundwater quality standards. We understand the discharge water cannot contain toxic pollutants defined in WQCC 1101, TT. In addition, we can discharge water with levels observed for parameters without WQCC standards to the ground.

KAFB2854



4. For the subject sampling events, the following parameters exceeded WQCC standards:

<u>PLAN</u>	<u>WELL</u>	<u>ANALYTE</u>	<u>RESULT</u>	<u>WQCC STANDARD</u>	<u>PURGE VOLUME</u>
Oct 04	1061	Manganese	0.33 mg/l	0.2 mg/l	55 Gal
TAG	0904	Nitrate as N	20 mg/l	10 mg/l	45 Gal
ST-106	2004/D	Fluoride	2.1/2.1 mg/l	1.6 mg/l	50 Gal
	8282	Sulfate	610 mg/l	600 mg/l	50 Gal
Dec 04	0622	TCE	0.0316 mg/l	0.10 mg/l	330 Gal (D)
WP-26					
Jan 05	0312	Nitrate as N	18.1 mg/l	10 mg/l	120 Gal
ST-105 NO3	0315	Nitrate as N	11 mg/l	10 mg/l	60 Gal
	0508	Nitrate as N	24.3 mg/l	10 mg/l	25 Gal
	0512	Nitrate as N	13 mg/l	10 mg/l	12 Gal
	0514	Nitrate as N	28.9 mg/l	10 mg/l	43 Gal
	0516	Nitrate as N	25.3 mg/l	10 mg/l	30 Gal
	0520	Nitrate as N	13.2 mg/l	10 mg/l	35 Gal
	0521A	Nitrate as N	23.4 mg/l	10 mg/l	4.5 Gal
	0522	Nitrate as N	17.2 mg/l	10 mg/l	44 Gal
	0602	Nitrate as N	16 mg/l	10 mg/l	N/A
	0608	Nitrate as N	24.5 mg/l	10 mg/l	50 Gal
	0609	Nitrate as N	13.2 mg/l	10 mg/l	N/A
	0610/D	Nitrate as N	17.4 mg/l	10 mg/l	N/A
	0611	Nitrate as N	12.4 mg/l	10 mg/l	55 Gal
	0612	Nitrate as N	25.6 mg/l	10 mg/l	18 Gal
	0613	Nitrate as N	14.1 mg/l	10 mg/l	105 Gal
	0614	Nitrate as N	23.4 mg/l	10 mg/l	41 Gal
	0616	Nitrate as N	20.3 mg/l	10 mg/l	72 Gal
	0617	Nitrate as N	13.6 mg/l	10 mg/l	34 Gal
	0620	Nitrate as N	11.8 mg/l	10 mg/l	61 Gal
	0621	Nitrate as N	13.6 mg/l	10 mg/l	34 Gal
	0623	Nitrate as N	30.7 mg/l	10 mg/l	68 Gal
	0904	Nitrate as N	20 mg/l	10 mg/l	20 Gal
	TJA-4	Nitrate as N	26.2 mg/l	10 mg/l	56 Gal
	TJA-5	Nitrate as N	11.2 mg/l	10 mg/l	30 Gal
Jan 05	2004/D	Fluoride	2.2/2.2 mg/l	1.6 mg/l	20 Gal
ST-106					

Notes:

N - nitrate

D - duplicate sample

Gal - gallons

mg/l - milligrams per liter

Notes (cont):

N/A - Not applicable: Purge water is no longer accumulated in purge tanks during groundwater sampling at monitor wells KAFB-0602, 0609 and 0610. These three wells also serve as extraction wells, continuously pumping the nitrate-contaminated groundwater into a holding pond that is used as part of a remediation system at the site.

(D)-Development water (not included in annual discharge volume)

5. As per the subject conversations, KAFB was permitted to discharge the purge water from the monitor wells listed above to the ground, directly adjacent to the monitor wells. The total volume of sample purge and development water discharged during these events was 2236 and 2380 gallons respectively. The volume of discharge per sampling events for FY05 is as follows:

Previously reported for FY05 (KAFB, 5 Nov 04)

- 3,697 gal, Jul 04 TAG and ST-105 sampling events discharged in Oct 03,

This report for FY05:

- 365 gal, Oct 04 TAG and ST-106 sampling event discharged in Jan 05,
- 1,696 gal, Jan 05 ST-105 NO3 sampling event discharged in Jan 05
- 2,050 gal, Sep/Oct 04 LF-01 and OT-28 development water discharged in Feb 05.
- 330 gal, Dec 04 WP-25 development water discharged in Apr 05,
- 175 gal, Jan 05 ST-106 sampling event discharged in Apr 05,

In our 5 Nov 05 letter to NMED-GWQB we requested an increase in the volume of purge water to be discharged to 11,980 gallons per year. The total volume of purge water (excluding development water) discharged to date in FY 05 is 5,933 gallons (3,697 + 2236). We have not exceeded our proposed annual discharge volume.

6. The KAFB LTM results are compared to the applicable WQCC groundwater and New Mexico Solid Waste Management Regulation (SWMR) standards. Exceedences of these regulatory standards as outlined in this letter have previously occurred and been reported to the NMED-GWQB or NMED-Hazardous Waste Bureau respectively and do not require additional notification.

7. For future sampling events, we will continue to obtain approval to discharge purge water containing constituents above WQCC standards. Please contact Mark Holmes at (505) 846-9005 or myself at (505) 853-6534 if you have questions or need additional information.



CARL J. LANZ, P.G., GS-13
Chief, Restoration Section

cc:

→ NMED-HWB, Mr. Kieling
NMED-HWB KAFB, Mr. McDonald
NMED-GWQB, Mr. Schuman
EPA Region 6, Ms. King
AFMC-CEVR, Ms. Linthicum
AFMC-CEVC, Mr. Fort
377 MSG/CEVC, Mr. Montañó
USACE Omaha District, Mr. Rowe
AFCEE, Mr. Hatfield
Tetra Tech FW, Ms. Moss
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MWH, Ms. Jarocki